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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,923	06/19/2003	Eric B. Hochberg	ASRC-1	1872

1054 7590 07/01/2004

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EXAMINER

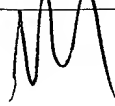
COCKS, JOSIAH C

ART UNIT PAPER NUMBER

3749

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/601,923	Applicant(s) HOCHBERG ET AL. 	
	Examiner Josiah Cocks	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/19/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. New corrected drawings are required in this application because Figure 11 is blank. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 recites the limitation "said fibers" in line 3. There is insufficient antecedent basis for this limitation in the claim. Applicant has not introduced fibers. As best can be determined, and for the purpose of an examination on the merits, the recitation of "fibers" has been regarded as --strings--. Correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by *Russell, JR. et al.* (US # 4,071,017) (hereinafter "*Russell*") (cited by applicant).

Russell discloses a solar energy concentrator as described in applicant's claims 18 and 20 including a parabolic trough having a reflector shaped by a plurality of tensioned string/wire pairs (59) extending along each trough (see Fig. 1), each pair having respective strings positioned on opposed surfaces of the reflector (see Fig. 13) and includes plastic sleeves (see col. 10, lines 1-16). The reflector is a membrane and is made of a Mylar film (see col. 10, line 5) and the strings are not regarded as putting significant tension on this film.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 19, 21-25, and 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Russell* as applied to claims 18 and 20 above in view of *Lechner* (US # 5,365,920).

Russell discloses all the limitations of claims 19, 21-25, and 1-17 except for a transparent tubular housing enclosing the reflector wherein the housing includes endplates and is pressurized above external atmospheric pressure, and the means for rotating the housing to receive incident sunlight.

In regard to claims 10 and 24, OFFICIAL NOTICE is taken that carbon fiber is known material for metal string or wire. It would have been obvious to a person of ordinary skill in the art to select a material such as carbon fiber for the wire/string of *Russell* and is not regarded as patentably distinct.

Lechner teaches a solar energy concentrator in the same field of endeavor as *Russell* wherein the concentrator of *Lechner* includes a transparent tubular housing (1) with endplates (see Figs. 2a-2c) wherein the housing includes a gas that provides an internal pressure that is higher than atmospheric pressure (see col. 2, lines 15-21). Therefore, the examiner considers that the endplates are hermetically sealed to the housing. The examiner also considers that when *Russell* is modified to include the tubular housing of *Lechner* the elevated pressure would

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partially contribute to the tension of the strings/wires. *Lechner* also discloses means (11) for rotating the housing to track the position of the sun (see col. 3, lines 22-25).

Therefore, in regard to claims 19, 21-25, and 1-17, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the solar concentrator of *Russell* to incorporate the housing of *Lechner* as this housing desirably follow the path of the sun and yields a high efficiency (see *Lechner*, col. 3, lines 22-25 and col. 4, lines 39-45).

9. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Lechner* (US # 5,365,920) view of *Kelton* (US # 4,296,738).

Lechner discloses in Figures 1-8 a solar energy concentrator similar to that described in applicant's claims 26 and 27 including a tubular housing (1) having opposed ends, a pair of opposed endplates sealing the housing (see Figs. 2a-2c), and a parabolic contoured reflective surface (5) extending within the housing. The housing (1) includes a gas that creates an increased internal pressure higher than atmospheric (see col. 2, lines 15-20). Therefore, the examiner considers that the endplates are hermetically sealed to the housing.

Lechner possibly does not disclose that the endplates have convoluted edge and that the housing is secured in compression with the edge or for a ring clamp assembly.

Kelton teaches a solar collector in the same field of endeavor as *Lechner* wherein the collector of *Kelton* includes a tubular housing (48) with endplates (52 and 54). The endplates are secured to the housing by means of ring clamp assemblies (66 and 64) that include ring members (68 and 70) that include inwardly contoured surfaces to cooperatively engage the peripheral

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elements of the plates (52 and 54). The examiner regards the matching contoured surfaces to be the convoluted edges as claimed by applicant.

Therefore, in regard to claims 26 and 27, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the endplates of *Lechner* to incorporate the shape and clamping assemblies of the endplates of *Kelton* as these endplates and attachment means desirably serve to maintain the structural integrity of the system (See col. 4, lines 35-48) and also aiding in rendering the unit structurally rugged and compact (see col. 5, lines 28-31).

Conclusion

10. This action is made non-final. A THREE month shortened statutory period for reply has been set. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) months from the mailing date of this communication.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yoke, Marshall et al., Sick, and JP 2003-329963 are included to further show the state of the art concerning solar concentrator structure.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Josiah Cocks whose telephone number is


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(703) 305-0450. The examiner can normally be reached on weekdays from 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus, can be reached at (703) 308-1935. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

jcc
June 23, 2004


JOSIAH COCKS
PRIMARY EXAMINER
ART UNIT 3749